

REMARKS

I. Status of the claims

Claims 1-15 are pending for reconsideration.

II Claimed Invention

Applicant's claim 1 claims a method for preparing a high modulus, high density polyethylene (HDPE) film. The method comprises orienting in the machine direction (MD) an HDPE blown film to a draw-down ratio greater than 10:1 (Specification, page 5, lines 19-29). The MD oriented film having an MD 1% secant modulus of 1,000,000 psi or greater. Preferably, the MD 1% secant modulus is 1,100,000 psi or greater (Specification, page 6, lines 19-22). Preferably, the HDPE has a density within the range of 0.950 to 0.970 g/cc (Specification, page 3, lines 9-14), a weight average molecular weight (Mw) within the range of 130,000 to 1,000,000, and a number average molecular weight (Mn) within the range of 10,000 to 500,000 (Specification, page 3, lines 15-24).

III. Examiner's Rejections

(a) Claims 1, 2, 4, 5, 14 and 15 are rejected under 35 U.S.C. § 102(e) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Bowling et al. (US 6,887,923).

(b) Claims 3 and 6-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bowling et al. (US 6,887,923).

(c) Claims 1-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Duckwall, et al. (US 6,391,411).

(d) Claims 1-15 are provisionally rejected on the ground of obviousness double patenting over claims 1-16 of copending Application No. 10/879,763.

IV. Response to Rejections

(a) Response to anticipation and obviousness rejections of claims 1, 2, 4, 5, 14 and 15 over Bowling et al.

Applicant respectfully requests that the Examiner withdraw the obviousness rejection of claims 1, 2, 4, 5, 14 and 15 over Bowling et al. because, as the Examiner recognized, Bowling et al. can be qualified as prior art only under 35 U.S.C. §102(e) and because the claimed invention of this application and Bowling et al. are both owned by Equistar Chemicals, LP. Thus, Bowling et al. is disqualified as prior art against claims 1, 2, 4, 5, 14 and 15 under 35 U.S.C. §103(c).

Applicant also requests that the Examiner withdraw the anticipation rejection of claims 1, 2, 4, 5, 14 and 15 over Bowling et al. because Bowling et al. fails to teach each and every element of the claimed invention.

As discussed above, Applicant's claim 1 claims a method for preparing a high modulus, high density polyethylene (HDPE) film. The method comprises orienting in the machine direction (MD) an HDPE blown film to a draw-down ratio greater than 10:1 to produce an MD oriented film having an MD 1% secant modulus of 1,000,000 psi or greater. Bowling et al. cannot anticipate claim 1 because it does not teach or suggest orienting an HDPE film uniaxially in the machine direction to produce an MD oriented film having an MD 1% secant modulus of 1,000,000 psi or greater. The Examiner's rejection is entirely based on the inherency theory. But note that the reference itself neither oriented any HDPE film at a drawdown ratio greater than 10 nor suggested orienting HDPE film at a drawdown ratio greater than 10 would produce an MD oriented film having an MD 1% secant modulus of 1,000,000 psi or greater.

For the same reason, claims 2, 4, 5, 14 and 15 cannot be anticipated by Bowling et al. because they all depend from claim 1 and thus incorporate all of the limitations of claim 1.

(b) Response to obviousness rejection of claims 3 and 6-13 under 35 U.S.C. § 103(a) as being unpatentable over Bowling et al.

As discussed above, Bowling et al. is disqualified as prior art under 35 U.S.C. 103(c). Thus, Applicant respectfully requests that the Examiner withdraw the obviousness rejection of claims 3 and 6-13 over Bowling et al.

(c) Response to obviousness rejection of claims 1-15 over Duckwall et al. (US 6,391,411).

As the Examiner recognized, Duckwall et al. never teaches or suggests orienting HDPE film uniaxially in the machine direction at a drawdown ratio greater than 10. Nor does it teach or suggest that orienting HDPE film in the machine direction would produce an MD oriented film having an MD 1% secant modulus of 1,000,000 psi or greater. These are two essential elements of claim 1 and its dependent claims 2-15. Thus Duckwall et al. cannot make claims 1-15 obvious because those two claim elements are missing from Duckwall et al.

Applicant has shown ample evidence in the specification that orienting HDPE film at a drawdown ratio 10 or less does not produce an MD oriented film having an MD 1% secant modulus of 1,000,000 psi or greater. See Tables 1-3 of the application. These results defeat any prima facie case of obviousness against claims 1-15 based on Duckwall et al.


(d) Response to obviousness double patenting rejection of claims 1-15 over claims 1-16 of copending Application No. 10/879,763.

Applicant has attached a terminal disclaimer which permits claims 1-15 of this application to expire at the same time as claims 1-16 of copending Application No. 10/879,763 if it issues as a patent.

V. Conclusion

Applicant believes that claims 1-15 are patentable and asks the Examiner to withdraw the rejections and allow the claims. Application respectfully invites the Examiner to phone his attorney, Shao-Hua Guo, at 610 359 2245 if further discussion of this application is deemed helpful by the Examiner.

Respectfully submitted,
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